



## Chesterfield County, Virginia Department of Building Inspection

9800 Government Center Parkway – P.O. Box 40 – Chesterfield, VA 23832-0040

Phone: (804) 748-1057 – Fax: (804) 751-4713 – Internet: chesterfield.gov

**RICHARD C. WITT**  
Interim Building Official

### ADVISORY

**Selected changes affecting residential building construction under the 2009 Virginia Residential Code, effective for permits applied for on or after March 1, 2011:**

#### Procedural changes and reminders:

- Framing inspections and all subsequent inspections will not be approved until all applicable floor slab inspections are approved.
- Ufer grounding is required where steel is present in a footing: Use copper/aluminum wire attached to footing re-bars, OR use rebar attached to footing re-bars. Attach ground wires to rebar with approved connectors.
- All applications for permitting shall include the code under which the plans are to be reviewed (ex 2009 IRC).

- 
- **R202 Definitions:** Habitable attic: Finished or unfinished space that includes potentially habitable space that meets the requirements for habitable space. Emergency escape and rescue opening and smoke detectors are required.
  - **R301.3 Story height:** Story height limitation increased to 11'7".
  - **R302.5 Dwelling/garage opening/penetration protection:** Penetrations must be filled to resist passage of combustion products and flame.
  - **R305.1 Minimum height:** Bathroom fixtures require a min. headroom of 6'8" from the center of the 21" front clearance area. It also now requires that there be 6'8" headroom above all corners of a 36" square in front of a shower head.
  - **R308.4 Hazardous locations #5:** Safety glazing required within 60" horizontally and in a straight line from water's edge of a hot tub, whirlpool and bathtub.
  - **R312 Guards:** Required if the walking surface of a deck, balcony, or porch is greater than 30" above the grade below, measured 36" out from the edge. If seating is present, the measurement for the required 36" height is taken from the top of such seating.
  - **R314.2 Smoke detection systems:** Where installed, they shall become a permanent fixture owned and maintained by the homeowner and shall be monitored by an approved offsite monitoring agency. If the system is removed or not monitored as required, then the system shall be replaced with approved smoke detectors or the remaining components must function as required for smoke detection.
  - **R315 Carbon monoxide alarms:** Required for new homes with fuel fired appliances or an attached garage; to be located outside each sleeping area.
  - **R317 Locations for protection against decay:** Wood siding, sheathing and exterior wall framing less than 2" measured vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surfaces exposed to the weather shall be naturally durable or preservative-treated.
  - **R319 Site address:** House number shall be min. 4" tall with a 1/2" stroke on a contrasting background; color visible from the road; mounted on the house or on a pole or monument.
  - **R329 Fire extinguishers:** Shall be Type 2-A: 10-B: C rated located in the kitchen area of all new houses.
  - **R401.4.1 Soil bearing pressure:** Chesterfield County will assume 1500# unless the soil engineer specifies soil type or tests the soil bearing pressure.
  - **R403.1. (table):** The new minimum footing requirements will be: 1 floor light frame - 16" wide X 8" thick with reinforcing steel; 2 floors light frame - the engineer must specify if the dwelling will have a basement or a crawl,

the foundation materials, the assumed soil bearing capacity and the footing size and width for the particular house.

- **R403.1.6 Foundation anchorage:** ½” anchor bolts or equivalent must be embedded into concrete or into the grouted cells of masonry units. It is not permitted to place foundation bolts or straps into cores of brick, hollow masonry or in the interstitial space (collar joint) between CMU and brick.
- **R404 Foundation and retaining walls:** Here are the highlights of this section; it has been re-written. Concrete foundation walls must be laterally supported at the top and bottom. A new table specifies horizontal reinforcing. There are eight new tables that address the vertical reinforcement. Concrete foundation stem walls that are not laterally supported at the top: walls retaining less than or equal to 48” of fill shall be constructed as a concrete foundation wall; walls retaining more than 48” of fill shall be designed as a retaining wall by a registered design professional. Concrete foundation stem walls that are laterally supported at the top: walls retaining less than or equal to 48” of fill shall be constructed as a concrete foundation wall. Where joists run parallel to the foundation wall blocking is required between three end joists every 48”. Walls retaining greater than 48” of unbalanced fill, where the slab on ground provides lateral support for the top of the wall, the connection between the stem wall and the slab shall be in accordance with either PCA 100 or accepted engineering practice. The support shall always be installed on the tension side of the wall.
- **R602.3 (5) (table) Size, height and spacing of wood studs:** This chart resolves how to handle the stud spacing and sizing depending on roof trusses. The changes here could require the use of 2x6 wall studs in certain instances where a habitable attic is present.
- **R602.6.1 Drilling and notching of top plate:** The required strap must extend a minimum of 6” past the cut on each side.
- **R602.10 Wall Bracing:** This section has been re-written with a “simplified method”. Please refer to our website for additional resources on this section.
- **R612.2 Window sills:** The sill for an operable window greater than 72” above grade shall be greater than or equal to 18” above the floor unless the following exceptions are met: window is permanently configured such that it will not allow a 4” sphere to pass; guard devices are installed; an opening limiting device is installed. When an opening limiting device is installed on a window that serves as an emergency escape and rescue opening, it must comply with the following: operate without keys, tools or special knowledge; require less than or equal to 15 pounds of force to operate; operate in all types of weather; be clearly identified for use in emergencies and maintain minimum net clear opening requirements.
- **R703 and Table R703.4 weather resistant exterior covering:** Weather resistance changed to water resistance AND wind resistance. Water-resistive barrier is required behind masonry veneer (even with 1” air gap).
- **R703.7.4 Masonry veneer anchorage:** Approved metal ties shall be installed a minimum 1½” into mortar or grout and have a minimum 5/8” mortar or grout cover on the outside. Reminder: Brick veneer cannot support any vertical load other than the dead load of the brick veneer above. It is not allowable to connect to or through brick veneer.
- **R703.11.1.1 Vinyl siding:** Soffit panels shall be individually fastened to a nailing strip, fascia, sub-fascia component or as specified by manufacturer’s instructions.
- **R905.2.8.3 Sidewall flashing:** Step flashing shall be 4” high x 4” wide minimum against vertical sidewalls. Sidewall flashing shall terminate in a manner that directs water away from the wall and onto the roof and/or into the gutter
- **R1001 and R1003 Masonry fireplaces and chimneys:** Fireplace walls must be equal to or greater than 8” of solid masonry and the smoke chamber must be parged smooth with refractory mortar. Clay chimney flue liners must be laid in medium-duty water insoluble refractory mortar
- **N1102 Building thermal envelope:** U-factor requirements for windows and doors has changed from .40 to .35.
- **N1102.2.3 Access hatches and doors:** They must be weather-stripped, insulated to R-38 and provided with a retainer when loose fill insulation is used
- **N1102.4 Air leakage:** Wood burning fireplaces must have gasketed doors and be provided with outdoor combustion air. To prevent air infiltration, rim joist junctions must be sealed or the air barrier must extend to below the sill plate.
- **N1103 and N1104 Systems and lighting systems:** Homes with forced air heating systems must have at least one programmable thermostat. A minimum of 50% of all lamp bulbs in permanently installed fixtures must be high efficacy (ex. compact fluorescent lamp).